A NEW SPECIES OF *ERIGERON* (ASTERACEAE: ASTEREAE) FROM THE RÍO MAYO REGION OF SONORA, MEXICO

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ABSTRACT

Erigeron barbarensis Nesom & T.R. Van Devender, sp. nov., is a previously undescribed species from the Río Mayo region of northwestern Mexico. It is similar to *Erigeron karvinskianus* but differs in its annual duration, slender to delicate taproot, glandular stems with spreading hairs, ciliate leaves, subcorymboid capitulescence, smaller heads, and caducous pappus bristles. The new species is known from two localities -- one in southern Sonora, the other in closely adjacent Chihuahua.

KEY WORDS: *Erigeron* sp. nov., *Erigeron karvinskianus*, Sonora, Chihuahua, Mexico

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Erigeron barbarensis Nesom & T.R. Van Devender, sp. nov.

Erigeronti karvinskiano DC. similis sed differt duratione annua, radice palari tenui vel delicata, caulibus glandulosis trichomatibus patentibus, foliis ciliatis, capitulescentia subcorymboidea, capitulis minoribus, et setis pappi caducis.

TYPE: México: Sonora. Mpio. Álamos, Barranca Pozo Azul above junction with Arroyo Santa Bárbara, ca 3 km S of Rancho Santa Bárbara (ENE of Álamos), ca. 27° 05'40"N, 108° 43'15"W, oak woodland with tropical elements, 900 m elev., 5 Oct 2006, *T.R. Van Devender 2006-1194* with Reina-G., Dimmit, and Loyola-R. (holotype: TEX; isotype: MEXU).

Plants annual from a slender, often delicate taproot. Stems erect, 25–55 cm high, weakly hirsutulous on proximal 1/3–1/2 and minutely glandular with viscid type B and type C trichomes (Nesom 1976), loosely strigose with upcurved trichomes on distal 1/2 and eglandular. Leaves basal and cauline, basal oblanceolate to spatulate, often deciduous by flowering, cauline narrowly elliptic to elliptic-lanceolate or elliptic-oblanceolate, not clasping, mostly 2–4 cm long, 5–10 mm wide, entire or with 1–2 pairs of coarse teeth, relatively even-sized up to the capitulescence or largest near midstem, hirsutulous-strigose with basally erect but antrorsely upcurved hairs, eglandular, margins antrorsely ciliate. Heads 3–8 in a loosely corymboid arrangement, on peduncles 15–45 mm long; involucres ca. 4 mm wide; phyllaries in 3–4 subequal series, the inner 2.0–2.5 mm long, sparsely hirsutulous-strigose along the midvein, eglandular. Ray florets 32–48 in 1 series, corollas 5–6 mm long, white, laminae 0.2–0.4 mm wide, not coiling. Disc florets: corollas 1.8–2.0 mm long. Achenes oblong, ca. 1 mm long, 2-nerved, sparsely strigose; pappus of 10–15 fragile, basally caducous bristles, outer series not evident.

Additional collection studied. México. Chihuahua. Río Mayo, Guasaremos, tropical Sonoran hillslope, 16 Sep 1935, *H.S. Gentry 1828* (MO).

The localities for the new species are in the broad Río Mayo region of southern Sonora and adjacent Chihuahua as defined by Gentry (1942) and Martin et al. (1998). *Gentry 1828* was collected on a hill slope in the margin between Short-tree Forest and Oak Forest (tropical deciduous forest and oak woodland in Martin et al. 1998) at 915 m elevation at Guasaremos (27°39'30"N 108°42'30"W). This locality is in the Sierra Madre Occidental in the upper Río Mayo drainage in Chihuahua about 85 km by air north-northeast of Alamos, Sonora. The type collection was made in the Rancho Santa Bárbara area, a southwestern extension of the Sierra Madre Occidental about 25 km by air east-northeast of Alamos in southern Sonora. The specific epithet refers to Arroyo Santa Bárbara, recognizing its importance for the flora of tropical Sonora.

The type locality is Barranca Pozo Azul, a deep rocky canyon that joins Arroyo Santa Bárbara from the west just above its junction

with Arroyo Verde. The vegetation is oak woodland dominated by encino cochi (*Quercus tuberculata*) on steep, shady slopes. A population of the palma de la virgen cycad (*Dioon sonorae*) is nearby. Ferns (*Anemia affinis, Asplenium palmeri, Polypodium praeterissimum, Woodsia mollis*), spike moss (*Selaginella pallescens*), and other herbs dominate the shady understory. The vegetation of the broader Arroyo Santa Bárbara area is pine-oak forest and oak woodland at 1200 to 1500 m elevation, oak woodland down to 1000 m, and tropical deciduous forest down to 300 m on the Río Cuchujaqui, a major tributary of the Río Fuerte in Sinaloa.

The deep, shady Arroyo Verde, which joins Arroyo Santa Bárbara from the east several kilometers below the ranch, supports the only semideciduous forest in Sonora with northern isolated stands of tropical trees (*Aphananthe monoica, Bursera simaruba, Cinnamomum hartmanii, Dendropanax arboreus,* and *Drypetes gentryi*).

Erigeron barbarensis is similar to *E. karvinskianus* in leaf shape, production of small, axillary leaves, and white, non-coiling rays. Both species characteristically occur in subtropical vegetation at relatively low elevations (most species of *Erigeron* occur in temperate, arid, or alpine vegetation). We had tentatively identified the Gentry collection as a morphologically unusual, geographically disjunct collection of *E. karvinskianus*, but with the Sonoran collection, its evolutionary distinction became apparent. The new species differs in a number of features, as outlined below.

1. Plants annual from a slender to delicate taproot; stems weakly hirsutulous and minutely glandular on proximal 1/3–1/2, loosely strigose above with upcurved hairs; glandular stems with spreading hairs; leaves ciliate; heads in a subcorymboid capitulescence; involucres ca. 4 mm wide, the inner phyllaries 2.0–2.5 mm long; ray florets 32–48; pappus of 10–15 fragile, basally caducous bristles, outer series not evident.....**Erigeron barbarensis**

1. Plants perennial from a woody taproot or subrhizomatous caudex; stems closely strigose with straight hairs, eglandular; leaves not distinctly ciliate; heads in a diffuse arrangement; involucres 7–10 mm wide, inner phyllaries 2.5–4.0 mm long; ray florets 45–80; pappus of 15–27 persistent bristles, outer series of setae..**Erigeron karvinskianus**

ACKNOWLEDGEMENTS

We thank Ana Lilia Reina-G. and Gaspar Álvarez for help in the field and Billie Turner for helpful comments on the manuscript.

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